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2. A PTFE tube as claimed in claim 1 wherein the improved resistance to permeation by comparison with the non-convoluted tube is greater than 10%.

3. (Amended) A PTFE tube as claimed in **[any preceding]** claim 1 wherein the improved resistance to permeation by comparison with the non-convoluted tube is greater than 20%.

4. (Amended) A PTFE tube as claimed in **[any preceding]** claim 1 wherein the improved resistance to permeation by comparison with the non-convoluted tube is greater than 30%.

5. (Amended) A PTFE tube as claimed in **[any preceding]** claim 1 wherein the improved resistance to permeation by comparison with the non-convoluted tube is greater than 60%.

6. (Amended) A PTFE tube as claimed in **[any preceding]** claim 1 having a smooth internal bore.

7. (Amended) A PTFE tube as claimed in **[any preceding]** claim 1, which tube is obtained from a non-convoluted tube having an original wall thickness W_0 and an internal diameter ID by a process comprising:

1. subjecting the PTFE tube to a deformation force at a temperature at or above the gel transition temperature of PTFE to produce constrained convolutions having a thinned wall W_1; and

2. cooling the PTFE tube to below the gel transition temperature whilst continuing to constrain the deformations having the thinned wall W_1 until the convolutions having the thinned wall W_1 have become stable.

8. (Amended) A PTFE tube as claimed in **[any preceding]** claim 1, which on heating to above its gel transition temperature without a restraining force in place returns to within 20% of the tubes original wall thickness W_0 but will not do so below the gel transition temperature.

9. A method of producing a PTFE tube comprising external roots and peaks from a non-convoluted tube having an original wall thickness W_0 comprising:

1. subjecting the PTFE tube to a deformation force at a temperature at or above the gel transition temperature of PTFE to produce constrained convolutions having a thinned wall W_1; and

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2. cooling the PTFE tube to below the gel transition temperature whilst continuing to constrain the deformations having the thinned wall W_1 until the convolutions having the thinned wall W_1 have become stable.

10. A method of producing a PTFE tube as claimed in claim 9, wherein the tube is placed on a mandrel and a helical tool comprising a leading end and a following end is rotated relative to the mandrel at a speed such that the leading end applies a deformation force at above the gel transition temperature and the following end applies a restraining force until the temperature has dropped below the gel transition temperature and the convolutions have become stable.

11. A method as claimed in claim 10 wherein the mandrel is a plane cylindrical mandrel.

12. (Amended) A method as claimed in **[claims]** claim 10 **[or 11]** wherein the following end of the helical tool is maintained at a temperature below the gel transition temperature.

13. (Amended) A method as claimed in **[any of claims 9 to 12]** claim 9 wherein W_1 is less than 25% of W_0.

14. A method as claimed in claim 13 wherein W_1 is about 20% of W_0.

15. (Amended) A hose assembly comprising a PTFE tube as claimed in **[any of claims 1 to 8]** claim 1, a braid and one or more end fittings.

16. (Amended) Use of a PTFE tube as claimed in **[any of claims 1 to 8]** claim 1 in a hose assembly for the purpose of improving the resistance to permeation of said hose assembly.

17. (Amended) Use of a PTFE tube as claimed in **[any of claims 1 to 8]** claim 1 for the manufacture of a hose assembly intended to have improved resistance to permeation.

18. (Amended) A method comprising passing a fluid through a PTFE tube or hose assembly under a pressure greater than atmospheric pressure characterized in that the fluid is passed through a PTFE tube as claimed in **[any of claims 1 to 8]** claim 1 or the hose assembly as claimed in claim 15.

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